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Foreign Animal Disease Report

United States
Department of Agriculture

Animal and Plant
Health Inspection Service

Veterinary Services

Emergency
Programs



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Emergency Field Investigations

By March 7, 1988, the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), Veterinary Services, (VS) conducted 79 investigations of suspected foreign animal diseases to eliminate the possibility of introducing exotic diseases into the United States. Six investigations were for suspected avian influenza (AI), 4 for suspected exotic Newcastle disease, 15 for suspected hog cholera or African swine fever, 1 for equine encephalitis, 2 for suspected rinderpest-mucosal disease, 3 for miscellaneous or undesignated diseases and 48 for vesicular diseases. All investigations were negative for exotic diseases.

Foreign Animal Disease Awareness

In cooperation with the APHIS Public Awareness staff, VS has conducted an intensive exotic Newcastle disease information campaign in an effort to prevent introduction of the disease through smuggled birds. Press releases, APHIS Facts brochures on "Importing a Pet Bird" and "Exotic Newcastle Disease and the Pet Bird," and television spot announcements have been alerting everyone involved that commercial businesses and individuals should not purchase smuggled birds and have been showing how potential bird owners can avoid buying such birds.

An outbreak of exotic Newcastle disease in pet birds last spring (15-2:1) was apparently caused by a man who confessed to bringing birds illegally into the United States. The man was sentenced to 2 years in prison, followed by 3 years' probation, and ordered to repay \$141,000 to the U.S. Department of Agriculture, an amount equivalent to what the USDA paid to bird owners for birds destroyed to eliminate the outbreak. The guilty man's son was sentenced to 90 days in prison for his involvement in the incident.

Veterinary Services, APHIS, has worked closely with the Mid-Atlantic Cooperative Extension Service to develop brochures and program aids intended to increase public awareness of disease prevention and biosecurity for poultry. Eight video tapes are planned for completion this summer: (1) what is

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biosecurity, (2) broiler operations, (3) live bird markets, (4) egg laying operations, (5) hatcheries, (6) feed mills and transportation, (7) turkey operations, and (8) game birds. Posters outlining disease prevention measures have been developed for placement at the entrances to premises where poultry is housed. An exhibit is being developed for local, State, and national poultry meetings to increase public and industry awareness of measures to prevent the spread of poultry diseases.

To maintain and increase awareness of the threat of exotic diseases to the U.S. livestock and poultry industries, the Emergency Field Operations (EFO) staff has made presentations to Colorado State University veterinary students, State of Florida veterinary technicians, Delmarva Poultry Industry members, National Broiler Council members, and the Secretary of Agriculture's Advisory Committee on Swine Health.
(Dr. M. A. Mixson, 301-436-8073)

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Avian Influenza
Survey Update *N*

A survey of live bird markets in the United States for possible AI during 1987 was reported in the Spring 1988 issue (16-1:2). The type H₅N₂ AI virus isolated from a chicken in Florida and a chicken and a pheasant in New Jersey were not pathogenic in laboratory chickens.

Live bird markets were surveyed for possible AI in New York and New Jersey during January 25-29 and February 1-5, 1988. In New York, the 40 live bird markets surveyed and 183 cloacal swab samples collected represented poultry from 86 owners. No AI virus was found in samples tested by the National Veterinary Services Laboratories (NVSL).

Lentogenic Newcastle disease virus (NDV) was identified in eight samples, representing birds from three owners. The samples were from four guinea fowl, a chicken, a turkey, a duck, and an undetermined wild-type fowl. In New Jersey, 32 live bird markets were surveyed, and 94 cloacal swab samples were collected, representing poultry from 32 owners. No AI virus was found. Six paramyxoviruses were isolated and characterized as lentogenic NDV.

All survey data were collected using VS Field Investigation Form 12-27 and entered into the Recorded Emergency Animal Disease Information (READI) system. (See 15-3:1-2 and 14-4:3.) Data from New York and New Jersey were entered in a personal computer that was equipped with a new microcomputer version of READI software.

Eleven live bird markets were surveyed in New England, 4 in Massachusetts, 2 in Rhode Island, and 5 in Connecticut. Serums, cloacal swabs, and tracheal swabs were collected in Massachusetts and Rhode Island, and cloacal and tracheal swabs were collected in Connecticut. NVSL found all samples negative for AI.

Because low pathogenic or nonpathogenic AI virus type H₅N₂ was associated with live bird dealers, pet shops, and botanicas in the Miami area in 1986, testing of birds on similar premises in

the Miami area continued through 1987. Birds with antibodies for AI type H₅N₂ were found on eight premises: five botanicas and three pet⁵ shops. Three of these enterprises are currently either inactive or out of business. On the eight positive premises, 42 serologically positive birds were found at 12 different sampling times. Virus was not isolated from swab samples collected from these birds. Since July 1987, normal susceptible sentinel birds were placed on premises in Miami to help determine the presence of active infection. Two premises showed active infection and were voluntarily depopulated, cleaned, and disinfected. (Dr. M. A. Mixson, 301-436-8073)

Foreign Animal
Disease Update

Rift Valley Fever

Disease Status 1986 - 1987



Source: OIE Bulletin Vol. 99, No. 12, OIE Animal Health Yearbook 1986

In West Africa, **Rift Valley Fever (RVF)** was diagnosed in humans living on the flood plains of the Senegal River during November 1987. Both Mauritania and Senegal reported incidents of

the disease. Unconfirmed reports indicate that RVF activity may also have occurred in Mali. No other West African countries have reported the disease. However, Gambia recently requested RVF vaccine from the World Health Organization. More than 300 human cases of viral haemorrhagic fever with 43 deaths are believed to have occurred in the Trarza Region in the southern part of Mauritania. The epidemic mainly affected the Departments of Rosso and Keur Macene. Measures being taken to control the disease are public education, vector control, and vaccination of cattle against RVF.

The 1987 epidemic was the first documented occurrence of RVF virus in Western Africa. The virus was previously found in cattle in this region, but there was no epidemiological report of these occurrences. The filling of two new dams resulted in a decreased salinity of the Senegal River and its flood plains. The resultant changes were followed by a marked increase in mosquito populations.

Local shepherds associated heavy swarms of mosquitoes they had observed with abortions of all pregnant sheep and cattle in their herds. Nomadic shepherds traditionally associate high mosquito populations with abortions in animals. Episodes of human and animal diseases as extensive as those in 1987 were not reported in previous years.

In December 1987, the Asian Republic of the USSR reported foot-and-mouth disease (FMD) type 0₁ in a bovine herd in the Region of Kulyabskaya, Tadjikistan.¹ All 92 cattle in the herd were slaughtered. According to Moscow veterinary authorities, the November 1987 outbreak in the Riga District of the Latvian Republic of the USSR (see 16-1:3) has been eradicated, and all restrictive quarantine measures have been lifted.

In West Germany, four herds from the Hanover District of Lower Saxony were affected with FMD type 0₁ during January 1988, and 558 cattle, pigs, sheep, and goats were destroyed because of the outbreak. This was the second outbreak of FMD in this area since October 9, 1987. Epidemiological analysis showed that both outbreaks were accidental and were probably related to vaccine challenge tests with virus strain 0₁ (Kaufbeuren) that were being carried out in a nearby FMD vaccine plant.¹ Because West Germany is enforcing strict veterinary police measures, the European Economic Community (EEC) is not imposing additional sanctions. West German authorities were required only to guarantee that no products from the slaughterhouses that dealt with the infected animals be sold in the EEC.

The European Commission for the control of FMD issued a declaration in late November 1987 that Italy's 3-year-old FMD epidemic was officially over. Italian authorities had earlier responded to a request from the Commission to require the vaccination of pigs and revaccination of all cattle.

The World Reference Laboratory, Pirbright, England, reported the following FMD virus isolations for the months of November and

December 1987: type O from Saudi Arabia, Nepal, and Iran; type A from Saudia Arabia; type C from the Philippines; and type Asia₁ from Nepal.

During December, the Pirbright laboratory also isolated **swine vesicular disease** virus from samples submitted from Hong Kong.

In South America, during the months of October and November 1987, Brazil reported 43 herds affected with vesicular disease (FMD types O₁, A₂₄, C₃). Argentina reported 81 herds affected (FMD types A, O); Uruguay, 2 herds (FMD type A); Paraguay, 1 herd (FMD type O₁); Bolivia, 3 herds (FMD type A₂₄); Ecuador, 8 herds (FMD type A₁); and Colombia, 64 herds (FMD types O₁, A₂₄ and vesicular stomatitis types New Jersey and Indiana).

Vesicular stomatitis continues to be reported throughout endemic areas of Mexico, Central America, and Panama. Colombia reported an increase in vesicular stomatitis outbreaks during December 1987 and January 1988.

Rinderpest was reported in December 1987 in Ghana, Africa. Twenty-five of 135 cattle died in the outbreak. The Office International des Epizooties reported that the Government of Ghana had instituted appropriate control measures.

The Pan-African Rinderpest Eradication Campaign began during 1987, with vaccination programs in Burkina Faso, Ethiopia, Mali, Nigeria, and Sudan. The United Nations Food and Agriculture Organization plans to initiate further rinderpest campaigns in Southern Asia and the Near East during 1988.

Clinical cases of **bluetongue** in newly imported sheep were reported in Malaysia for the first time in October 1987 (six outbreaks) and again in December 1987 (three outbreaks). Local sheep, goats, and cattle have previously been serologically positive but without clinical signs.

Greece reported five flocks of sheep infected with **sheep pox** on the Island of Lesbos between October 11, 1987, and November 9, 1987. In an effort to stamp out the disease, 671 sheep were destroyed. Senegal reported cases of **sheep pox** and **goat pox** during December 1987.

Hog cholera outbreaks were reported in Malaysia, Taiwan, and Italy during November and December 1987. Yugoslavia reported an outbreak in January 1988.

In Zimbabwe, **lumpy skin** was clinically diagnosed and reported on three cattle farms during December 1987.
(Dr. Percy Hawkes, 301-436-8285)

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O.I.E.
Animal Health
Information
Systems

The Office International des Epizooties (O.I.E.) has operated continuously since its establishment in 1920 as the international clearinghouse for animal health and disease regulations and disease reporting among member countries. The organization's Animal Health Information Systems (A.H.I.S.) Group

held its fourth meeting March 7-9, 1988, at O.I.E. headquarters, Paris, to recommend improvements for O.I.E. publications, training seminars, and disease reporting activities. Group recommendations were submitted to O.I.E. Director General, Dr. Louis Blajan, for consideration by the O.I.E. General Committee that will meet in Paris, May 16-20, 1988.

The A.H.I.S. Group is chaired by Dr. Pedro N. Acha, Director of Inter-Institutional Affairs, Inter-American Institute for Cooperation on Agriculture (I.I.C.A.), Washington, D.C., and includes Dr. Roger Morris, New Zealand, and Dr. Vaclav Kouba, Czechoslovakia. Participants in the March 1988 meeting were Dr. Acha; Dr. Edwin I. Pilchard, U.S. Department of Agriculture, Animal and Plant Health Inspection Service; Dr. El Hadj A. Tall, Inter-African Bureau of Animal Resources, Kenya; and Dr. Valdir R. Welte, Dr. Houane Sihapanya, and Mrs. Patricia Herrera of the O.I.E. Information Service.

O.I.E. publications are distributed to member countries and can be purchased by arrangement with O.I.E., 12 rue de Prony, 75017 Paris, France (telephone (1) 227 45 74; telex 642 285 F Epizoti). These publications include conference proceedings and monographs on subjects ranging from brucellosis in sheep and goats to genetic engineering and embryo transfer technology. O.I.E. also publishes periodical reports, including the International Zoo-Sanitary Code, World Animal Health Annual Reports and monthly Bulletin, and, in cooperation with the World Health Organization and the United Nations Food and Agriculture Organization, the Animal Health Yearbook. Official O.I.E. publication languages are French, English, and Spanish.

The unique role of O.I.E. in the international exchange of animal health information is summarized in its statement of objectives:

1. To promote and coordinate experimental and other research work concerning the pathology and prophylaxis of contagious diseases of livestock and for which international collaboration is deemed to be desirable,
2. To collect and bring to the attention of governments and their sanitary services all facts and documents of general interest concerning the course of epizootic diseases and the means used to control them, and
3. To examine international draft agreements regarding animal sanitary measures and provide signatory governments with the means of supervising their enforcement.

O.I.E. has 110 member countries, 60 of which are currently participating in the A.H.I.S. program of animal disease reporting. The United States is a member represented by Dr. James W. Glosser, Administrator of the U.S. Department of Agriculture's Animal and Plant Health Inspection Service.

Dr. Glosser serves on the International Committee and the International Zoo-Sanitary Code Commission.

(Dr. Edwin I. Pilchard, 301-436-8069)

FMD was first confirmed in Colombia in the late 1950's in Los Llanos Orientales (the eastern plains) near the Venezuelan border. Within a decade, the disease had spread over most of the country, including the northwestern part where the planned construction of the Darien Gap segment of the Pan American Highway presented a threat for the dissemination of FMD from Colombia. Previously, the great tropical jungle located in this zone had provided a natural barrier to disease spread. Realizing that a completed Pan American Highway might serve as a corridor through which FMD could be introduced into Central and North America from Colombia, the United States and Colombia signed an agreement for the control and eradication of FMD in northwestern Colombia August 19, 1973. In August 1979, this document was replaced by a new agreement defining technical and administrative guidelines in the work areas of the program. Currently, a revised agreement that would replace the August 1979 accord is under study by U.S. Department of Agriculture (USDA) officials for subsequent submission to Colombian officials. The new agreement would allow for greater flexibility and for program expansion into a larger adjacent area. While the principal USDA goal is the protection of the livestock industries of Panama, Central America, Mexico, and the United States from FMD, the program can also be viewed as a pilot project for a larger FMD eradication program in Colombia and other South American countries.

The Colombian Agriculture Institute (ICA)/USDA Cooperative Foot-and-Mouth Disease Program was discussed in the March 1983 issue (11-1:5-9).

Funding. From 1973 through 1978, the United States provided the necessary funds for the program (\$7.8 million). However, since 1979, each government has contributed about 1 million U.S. dollars annually. Colombia's contributions for 1980 through 1982 exceeded \$1.5 million.

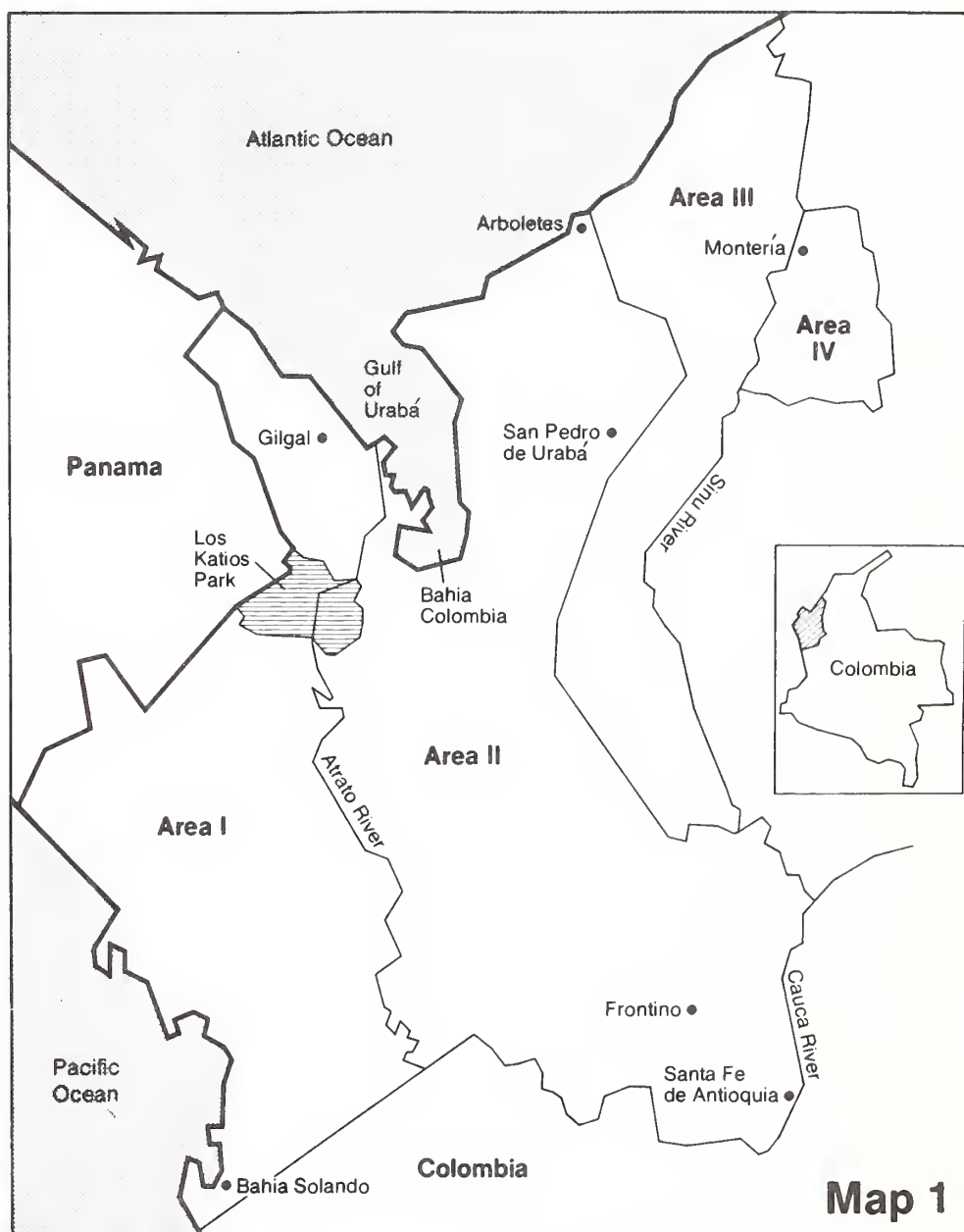
During calendar year 1987, each country contributed an additional \$488,000 to the regular budget of \$900,000. In 1988, the total budget will be almost \$3 million, with each government contributing about one-half of this amount. These additional funds will be used to purchase supplies and equipment and employ field personnel to expand the program into Area IV.

Progress and planning. Senior Review Group (SRG) representatives from the United States and Colombia meet annually to review program progress, provide guidance, and approve work plans and budgets. A technical committee meeting is held in conjunction with the SRG meeting to discuss and evaluate the technical aspects of the program. The resolutions and conclusions of the SRG and the day-to-day activities of the program are carried out by the ICA National Program Director and the USDA Senior Technical Advisor.

The 1979 agreement specified expansion of Los Katios National Park as a disease barrier to protect Panama and areas north from FMD. The final leg of the Pan American Highway will pass through the southern part of the park. The agreement also provided for

the acquisition of improvements made by settlers living within the park's extended boundaries. The Institute for Development of Renewable Natural Resources and Environment (INDERENA) is responsible for developing the park and for maintaining it free of livestock and settlers. No one is now living in the park area. The 72,000-hectare (177,916-acre) park is a joint ICA-INDERENA-USDA project administered and patrolled by a staff of 25 employees. Land and river patrols are supplemented by two overflights each year to assure that the area is maintained free of settlers, domestic animals, and agricultural activity.

The program operates in three geographical areas. (See 11-1:5-9.)



Area I, an FMD-free area covers 1,600,000 hectares (3,953,687 acres), has about 1,220 farms and ranches with 76,742 cattle; 11,356 pigs; 1,917 sheep and goats; and 6,794 horses.

Fifty-eight employees from four sector offices visit all farms in the area bimonthly to detect FMD should it gain entry. The use of FMD vaccine is prohibited. All cattle are identified by numbered ear tags.

Area I remained free of FMD from May 1974 until October 1984 when FMD was confirmed in a pig in Bahia Solano on the Pacific coast. This isolated outbreak was quickly eradicated without any spread. This critical area remains free of FMD by prohibiting the introduction of FMD susceptible animals from FMD-infected areas and by strictly controlling the movement of animals, animal products, and byproducts that could introduce FMD virus into the area.

Area II, the FMD control and eradication area, is located in the northern part of the Department of Antioquia. Covering 1,237,000 hectares (3,056,694 acres), it has about 8,063 farms or ranches with a combined total of 588,854 cattle, 31,872 pigs, 14,036 sheep and goats, and 39,182 horses. Ninety-three program employees from 10 different office locations inspect farms in this large area quarterly. There have been four clinical FMD outbreaks in Area II. The last one in cattle was in December 1985 near the border with Area III.

In early March 1988, FMD, type O, was diagnosed in 5 pigs in the Manglar community, Santa Fe de Antioquia sector. The pigs were immediately sacrificed and buried and 318 pigs in the adjacent surrounding area were given bi-valent, oil-adjuvanted FMD vaccine. The outbreak was eradicated without any spread. This was the first time in the 14-year history of the ICA-USDA program an FMD oil-adjuvanted vaccine was used in swine to help control and eradicate an FMD outbreak. The probable source of the FMD virus was food waste from a local restaurant which had purchased meat from outside the program area.

Area III, located in the western half of the Department of Cordoba, is the FMD control area. All of the outbreaks in Area II were traced to infected cattle that had entered the area illegally. In view of the limited number of outbreaks, FMD vaccination in Area II was stopped in April 1985, except in Frontino and Santa Fe in the south and Arboletes and San Pedro de Uraba in the north.

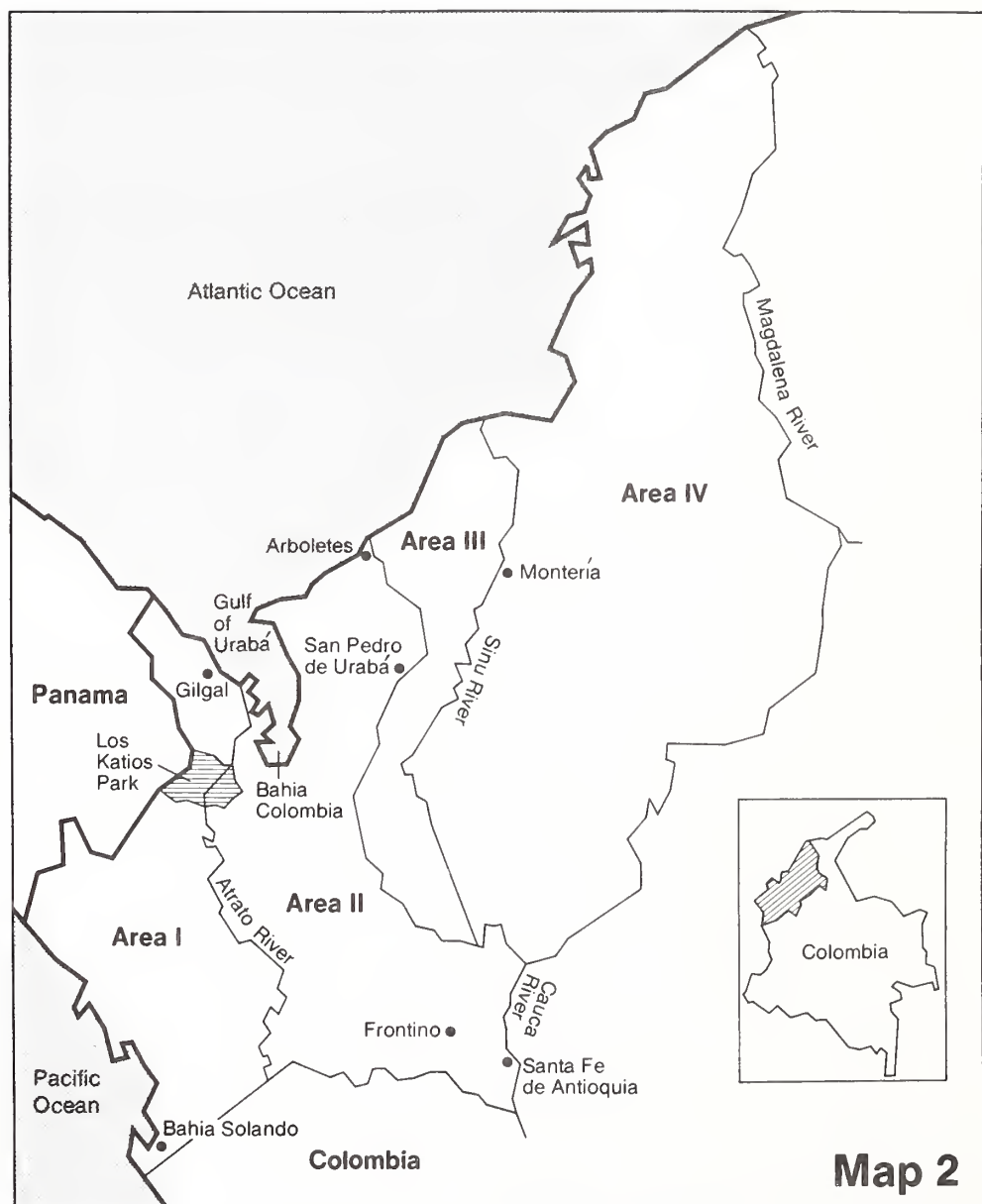
In October 1983, a new part was added to the southern part of Area II--the sectors of Frontino and Santa Fe de Antioquia. Their addition expanded the program by about 1,700 farms and 50,000 cattle. With repeated FMD vaccination in the southern and northern sectors, farm inspection, quarantine, and around-the-clock control and inspection of animals moving into the area, work toward eradication continues.

The development of a control program similar to Area II was initiated in Area III after the contribution of \$500,000 by Colombia during 1982.

Area III, part of the Department of Cordoba west of the Sinu River, has a total area of 850,000 hectares (2,100,396 acres),

with 5,895 farms or ranches and 557,537 cattle, 29,097 pigs, 25,628 sheep and goats, and 31,909 horses. Cattle are routinely vaccinated against FMD 3 times a year by both program personnel and by the owners. The program has gone through 17 vaccination cycles. As a result, two vaccination cycles are expected to be sufficient in 1988, especially because an adequate quantity of FMD oil-adjuvanted vaccine is available for widespread use. As the program progresses, Area III will eventually be managed as Area II. The work in Area III is carried out by 41 program personnel.

Program Area IV presently includes a small area east of Monteria known as the Monteria right border (see map). This sector is currently managed similarly to Area III and provides additional protection to Area III since some cattle are known to have moved from here into Area III in the past. Planned expansion has been approved by the SRG to extend Area IV as far east as the Magdalena and Cauca Rivers.



Map 2

The expansion will require 32 program offices, additional equipment, supplies, vehicles, and about 280 more personnel to provide program services to 31,688 farms and ranches and an estimated 4 million cattle. This expansion will double the size of the present program land area. It is scheduled to begin as soon as the new cooperative agreement is signed by both governments. Planning has been completed and detailed plans for Area IV are included in 1988 work plans. Since ICA has been carrying out periodic FMD vaccination in this area for about 15 years, few outbreaks of FMD have occurred. This history of successful FMD vaccination is expected to facilitate and accelerate cooperation in the ICA-USDA FMD program.

Some activities that have made the ICA-USDA program a success or indicate a measure of success are:

1. All farms and ranches are visited periodically to update animal census and inspect susceptible animals for evidence of vesicular disease. Surveillance also occurs during FMD periodic vaccinations and visits by program personnel to vaccinate against other common animal diseases.
2. Statistically significant numbers of cattle have been routinely and randomly tested for FMD antibodies with the virus infection-associated antigen (VIAA) test. All cattle reacting to the VIAA test are sampled by the probang method, and oesophageal-pharyngeal (O-P) specimens are tested for FMD virus. The number of VIAA positive animals from the nonvaccinated areas has steadily declined during the last several years.
3. When a report of a suspected vesicular disease is received or when disease signs are found on routine surveillance, the case is immediately investigated. If the condition is vesicular, the suspect premise is quarantined, and samples are sent to the vesicular disease laboratory in Bogota. A laboratory-confirmed diagnosis of FMD would result in immediate action, depending on the area of the outbreak. This could range from immediate slaughter and disposal of infected and exposed animals to herd vaccination with ring vaccination of adjacent cattle herds. If animals are slaughtered, owners receive indemnity payments for the animals destroyed under the FMD program.
4. In all program areas, a public information program is operating to make people more aware of the ICA-USDA cooperative FMD program. The objective is to inform the public of how the program is operating in each location and to teach livestock owners what they can do to prevent FMD, how FMD can be controlled and eradicated, and how they can promote rapid detection of FMD should outbreaks occur.

5. The Colombian Veterinary Biologics Company (VECOL), which produces the bivalent FMD vaccine used in the program areas, has steadily improved vaccine quality. For the last several years each vaccine lot produced has been submitted to the ICA National Laboratory for Veterinary Product Control for strict quality control testing in cattle before release for field use.
6. A most important factor in the program's success has been support from individual cattlemen and the various livestock associations and related institutions. Their support has been critical. These people and agencies have been quick to realize the tremendous economic benefit of FMD control and eradication.

Some nonprogram activities are of concern to the continuing success and functioning of the ICA-USDA program. These items include increased guerrilla and illegal drug activities in the program areas and continued United States and Colombian financial support for the program. The financial contribution of both governments continues, and cooperation with the Government of Colombia is excellent. Both countries recognize that it is in their best interests to accomplish the goals specified in the agreement.

Both Colombia and the United States appear to have a commitment to ensure that the existing program will continue to offer an adequate degree of protection against FMD for Panama, Central America, Mexico, Colombia, and the United States. (Dr. Floyd M. Jones, Bogota, Colombia, 57-1-285-1300, ext. 289 or 283) ✓

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